

EXHIBIT 43

Planet Labs Inc.
License Application
FCC Form 312
July 2015

Description of Application

With this application, Planet Labs Inc. (“Planet Labs”) requests modification of its authorization to operate a non-geostationary (“NGSO”) Earth imagery satellite system, Call Sign S2912. As detailed in the application below, Planet Labs requests authorization to continuously maintain and operate a constellation (a.k.a. a “Flock”) of up to **two hundred (200)** technically identical satellites across a variety of launches to enable whole Earth, daily coverage by its imaging fleet. Due to the low altitudes of the planned deployments, and thus the short orbital lifetime of the Planet Labs satellites, a continuous series of replenishment launches is required to maintain such a constellation. In light of this need, Planet Labs further requests authorization to launch a total of up to six hundred (600) technically identical satellites over the next 10 years, with the number of simultaneously operational satellites not exceeding two hundred (200). This two hundred (200) operational satellite limit includes the currently authorized eleven (11) satellites of Flock 1c,¹ and maximum fifty six (56) satellites authorized to be launched and deployed from the International Space Station.² The proposed additional satellites are technically identical to the currently authorized satellite systems, and Planet Labs incorporates by reference the technical information provided previously.³

Currently, Planet Labs is authorized to use the 401-402 MHz and the 449.75-450.25 MHz “UHF” bands as TT&C links (downlink and uplink, respectively) for the early commissioning phase, as well as for emergency back-up communications. Planet Labs requests modification to use these bands on a more regular basis throughout the mission lifetime in order to perform ranging and refine the orbit determination of the satellites. The UHF links are operated at very low data rates with an omnidirectional antenna on the satellite, and thus ranging and orbit determination can occur no matter what the orientation of the satellite. Planet Labs openly publishes its orbital ephemerides so that other satellite operators may more accurately assess potential collision risks and avoid false positive warnings.⁴ Enabling ranging and refined orbital determination throughout the mission lifetime of the Planet Labs satellites will greatly increase the safety of all space stations operating in the affected regions.

Planet Labs anticipates launching the next wave of technically identical satellites into Low Earth Orbit as early as January 2016. The satellites will be launched to orbits ranging from 350 km altitude, up to 720 km altitude, with the semi-major axis never exceeding 7,031 km (660 km above sea level), with

¹ See File No. SAT-MOD-20140321-00032 (granted 06/18/2014, Call Sign S2912)

² See File No. SAT-MOD-20140912-00100 (granted 10/23/2014, Call Sign S2912)

³ See File No. SAT-LOA-20130626-00087 (granted 12/03/2013, Call Sign S2912), File No. SAT-MOD-20140321-00032 (granted 06/18/2014, Call Sign S2912) and File No. SAT-MOD-20140912-00100 (granted 10/23/2014, Call Sign S2912).

⁴ See Planet Labs Public Orbital Ephemerides (Access at <http://ephemerides.planet-labs.com/>)

inclinations of 30 degrees and above.⁵ The majority of satellites will be launched to 475 km circular altitude, 97.3 degree inclination (Sun Synchronous Orbit). As the satellite orbits naturally decay over time, operations of the X-band and S-band links will continue down to 300 km altitude, and operations of the UHF links will continue down to 200 km altitude.

Planet Labs has already submitted applications for license from the National Oceanic and Atmospheric Administration (“NOAA”) to operate its satellites, which are private remote sensing space systems, and will continue to seek license from NOAA for all future launches. Planet Labs has previously received license to operate from NOAA for previous launches.⁶

Timely deployment of the proposed satellite systems will enable Planet Labs to guarantee uninterrupted operations of the unique imaging services being provided to customers in the U.S. and around the world. To the extent necessary to enable Commission action prior to the earliest expected launch in January 2016, Planet Labs respectfully requests expedited consideration of this request for launch and operation authority. In support of its request for authorization, Planet Labs offers the following information concerning its proposed satellite system.

⁵ The highest circular altitude a satellite will be launched to is 660 km. Elliptical orbits may be utilized with an apogee greater than 660 km, however the semi-major axis will never exceed 7,031 km (660 km above sea level).

⁶ See Planet Labs Inc. Licenses from National Oceanic and Atmospheric Administration to Operate a Private Remote Sensing Space System (Access at <http://www.nesdis.noaa.gov/CRSRA/licenseHome.html>).

I. Description of the Applicant

Planet Labs Inc. is a U.S. company funded by private investment and is headquartered in San Francisco, California. Planet Labs was initially incorporated in Delaware in December, 2010 under the name Cosmogia Inc., and the name of the corporation was legally changed to Planet Labs Inc. in June 2013. Planet Labs designs, constructs and operates small Earth imagery satellites, and provides Earth imagery products on a commercial basis to a variety of customers.

Planet Labs launched and operated two successful experimental missions, Dove 1 and Dove 2, in April 2013.⁷ Planet Labs also launched, and continues to operate, a third successful experimental mission, Dove 3, in November 2013.⁸

Once the satellite technology was matured via the experimental missions, Planet Labs began launching operational constellations. Planet Labs launched Flock 1, an operational constellation of 28 identical satellites, to the ISS in January 2014 under Call Sign S2912. Flock 1 was gradually deployed from the ISS throughout the month of February 2014 and successfully operated for approximately 5 months until the satellites began to deorbit and completely burn up via atmospheric decay. Planet Labs also launched Flock 1c in June 2014, a constellation of 11 identical satellites, to a 620 x 620 km Sun Synchronous Orbit (SSO), under Call Sign S2912, which continues to operate and has an expected operational lifetime of at least 2 years. Planet Labs continued to launch a series of satellites to the ISS, also under Call Sign S2912.

Now that the technology has fully matured, Planet Labs is ready for the next phase of development - simultaneous operation of up to 200 satellites to enable daily imaging of the whole Earth.

II. Information Required Under Section 25.114(d) of the Commission's Rules

A. General Description of Overall Facilities, Operations and Services

The physical and technical design of the proposed future satellites are identical to that of previously authorized "Flocks." The proposed satellite system will consist of a space segment comprised of up to 200 simultaneously operating and launched within the following bounds:

- Minimum Circular Altitude: 350 km
- Maximum Circular Altitude: 660 km
- Maximum Apogee: 720 km altitude (semi-major axis never exceeding 7,031 km, or 660 km above sea level)
- Inclination: 30 degrees and above
- Primary Orbit: 475 km circular altitude, 97.3 degree inclination (Sun Synchronous Orbit).

And a ground segment comprised of earth stations located in:

- Brewster, WA⁹

⁷ See FCC OET file number 0898-EX-ST-2012 and 0100-EX-PL-2012, respectively.

⁸ See FCC OET file number 0548-EX-PL-2012.

⁹ See SES-MOD-20140630-00551 (filed 06/30/2014, Call Sign E990069).

- Fairbanks, AK (UHF TT&C-only)¹⁰
- Maddock, ND¹¹
- Half Moon Bay, CA (UHF TT&C-only)¹²
- Fargo, ND (UHF TT&C-only)¹³
- Morehead, KY (UHF TT&C-only)¹⁴
- Las Cruces, NM (UHF TT&C-only)¹⁵
- Maui, HI (UHF TT&C-only)¹⁶

Along with other earth stations located in:

- Goonhilly, United Kingdom
- Chilbolton, United Kingdom
- Awarua, New Zealand
- Usingen, Germany
- Ningi, Australia
- Keflavik, Iceland

Launch of the next wave of Planet Labs satellites will begin as early as January 2016. Planet Labs will utilize both U.S. and foreign launch opportunities as either Primary or Secondary payloads. Planet Labs often takes advantage of “last minute” launch opportunities, or launch opportunities where the exact orbit or exact number of satellites to be launched is not known until very close to the launch date. To simplify the regulatory process, Planet Labs agrees to only launch within the above defined launch parameters and to present analysis for worst case scenarios within that range. The orbital period of the Planet Labs satellites will be approximately 90 minutes, and the expected operational lifetime of the satellites is approximately 2 years.

Planet Labs is authorized to use the 401-402 MHz and the 449.75-450.25 MHz “UHF” bands as TT&C links (downlink and uplink, respectively) for the early commissioning phase, as well as for emergency back-up communications. Planet Labs requests modification to use these bands on a more regular basis throughout the mission lifetime in order to perform ranging and refine the orbit determination of the satellites. Such uses are permissible under the Table of Frequency Allocations. The 401-402 MHz band is authorized for space operations on a secondary basis for non-federal users.¹⁷ The 449.75-450.25 MHz band is authorized for space telecommand, subject to agreement obtained under No. 9.21.¹⁸ Enabling ranging and refined orbital determination throughout the mission lifetime of the Planet Labs satellites will greatly increase the safety of all space stations operating in the affected regions.

¹⁰ See SES-LIC-20150410-00206 (filed 04/10/2015, Call Sign E150030).

¹¹ See SES-LIC-20150120-00021 (filed 01/20/2015, Call Sign E150004).

¹² See SES-LIC-20140318-00146 (granted 06/30/2014, Call Sign E140036).

¹³ See SES-LIC-20140411-00283 (granted 06/26/2014, Call Sign E140041).

¹⁴ See SES-LIC-20140411-00282 (granted 06/25/2014, Call Sign E140040).

¹⁵ See SES-LIC-20141027-00819 (granted 12/15/2014, Call Sign E140109).

¹⁶ See SES-LIC-20150121-00022 (granted 03/03/2015, Call Sign E150005).

¹⁷ See 47 C.F.R. § 2.106; *In the Matter of Orbital Imaging Corporation*, DA 99-353, at ¶¶ 3, 8 (1999).

¹⁸ See 47 C.F.R. § 2.106, footnote 5.286 and US87. Transmissions from the Flock satellites will not cause harmful interference to Federal and/or non-Federal stations operating in accordance with the Table of Frequency Allocations.

B. Power Flux Density Calculation

1. Power Flux Density at the Surface of the Earth in the band 8025-8400 MHz

The worst case power flux density (PFD) levels at the surface of the Earth will be identical to that of Flock 1, which was shown under all scenarios to be within the limits set forth in the ITU Radio Regulations Table 21-4.¹⁹

2. Power Flux Density at the Geostationary Satellite Orbit

No. 22.5 of the ITU Radio Regulations specifies that in the frequency band 8025-8400 MHz, which the EESS using non-geostationary satellites shares with the fixed-satellite service (Earth-to-space) or the meteorological-satellite service (Earth-to-space), the maximum PFD produced at the geostationary satellite orbit (“GSO”) by any EESS space station shall not exceed -174 dB(W/ m²) in any 4 kHz band. The calculation below shows that the PFD produced by the transmissions from the proposed Planet Labs satellites does not exceed the limit in No. 22.5, even in the worst possible hypothetical case.

The PFD is calculated as:

$$\text{PFD [dB(W/m}^2\text{/4 kHz)]} = \text{EIRP (dBW)} - 71 - 20\log_{10}(D) - 10\log_{10}(\text{BW}) - 24$$

Where:

EIRP is the Maximum EIRP of the transmission, in dBW;

D is distance between the satellite and affected surface area, in km;

BW is the symbol bandwidth of the transmission, in MHz.

The minimum possible distance between a Planet Labs satellite and GSO is $35786 - 720 = 35066$ km.

Under a hypothetical scenario of a Planet Labs satellite antenna radiating its peak EIRP toward GSO, the worst case scenario is EIRP = 15.92 dBW, BW = 29.7 MHz, which produces a PFD at GSO of -184.78 dB(W/m²) in any 4 kHz band. This does not exceed the ITU limit.

C. Interference Analysis

1. Interference between EESS systems operating in the band 8025-8400 MHz

Interference between the Planet Labs satellites and those of other systems is unlikely, even with the increase in number of satellites, because EESS systems operating in the 8025-8400 MHz band normally transmit only in short periods of time while visible from the dedicated receiving earth stations. For the interference to happen, satellites belonging to different systems would have to travel through the narrow antenna beam of the receiving earth station and transmit at the same time. In such an unlikely event, the interference can be still be avoided by coordinating the satellite transmissions amongst the various EESS users so that they do not occur simultaneously.

D. Public Interest Considerations

The grant of this application will permit Planet Labs to continue to launch and operate a state-of-the-art remote sensing satellite system. The data produced by the Planet Labs satellites will empower users to

¹⁹ See Planet Labs Inc., SAT-LOA-20130626-00087 (granted 12/03/2013).

make better decisions and will help enable a more sustainable planet. Planet Labs will provide a unique data set of global-coverage, frequently updated imagery that is currently unavailable from private sector or government remote sensing providers. In addition to traditional consumers of remote sensing data, Planet Labs will provide direct benefit to environmental and humanitarian organizations that historically have not had access to this extent of imagery. This service will complement existing offerings in the remote sensing market and will help promote new users and applications.

E. Orbital Debris Mitigation

Planet Labs has conducted an Orbital Debris Assessment Report (“ODAR”) for the additional Flock satellites in compliance with NASA-STD-8719.14. The Flock satellite systems are compliant with all applicable orbital debris requirements as listed in Section 25.114(d)(14).

The Flock satellites will not undergo any planned release of debris during their normal operations. In addition, all separation and deployment mechanisms, and any other potential source of debris will be retained by the spacecraft or launch vehicle. Planet Labs also has assessed the probability of the space stations becoming sources of debris by collision with small debris or meteoroids of less than one centimeter in diameter that could cause loss of control and prevent post-mission disposal and found the risk to be Compliant. Planet Labs has assessed and limited the probability of accidental explosions during and after completion of mission operations through a failure mode verification analysis and found the system to be Compliant. The Flock satellites do not carry any onboard propulsion.

Planet Labs has assessed and limited the probability of the Flock satellites becoming a source of debris by collisions with large debris or other operational spacecraft and found the risk to be Compliant. The orbital bands that Planet Labs launches to are significantly lower than the densest LEO regions.²⁰ Planet Labs will work closely with the launch providers to ensure that the satellites are deployed in such a way as to minimize the potential for collision with any other spacecraft.

Special care is also given to minimizing the potential for collision with manned spacecraft, including the International Space Station (ISS) and China’s Tiangong-1. The operational altitude of the ISS is approximately 400 km,²¹ and Tiangong-1 currently operates at an altitude of approximately 382 km.²² While both facilities are significantly below the baseline operational orbit altitude of 475 km for the Flock satellites, Planet Labs will coordinate with NASA to assure protection of the ISS on an ongoing basis, and with the China National Space Agency with respect to Tiangong-1 and successor vehicles.²³

The Flock satellites do not carry onboard propulsion, however some orbital maintenance can be performed using differential drag for phasing of the satellites along an orbital plane and for potential collision avoidance (if needed). In any case, the orbits of the satellites will naturally decay over time until

²⁰ See Keeping Space Clean: Responsible satellite fleet operations (Access at <https://www.planet.com/pulse/keeping-space-clean-responsible-satellite-fleet-operations/>).

²¹ <https://www.heavens-above.com/IssHeight.aspx> (last visited July 29, 2015).

²² http://www.china.org.cn/china/2011-11/19/content_23957633.htm (last visited July 29, 2015).

²³ Planet Labs will take identical proactive measures with respect to any other inhabitable orbiting objects that may be introduced during the license term.

the satellites reenter the atmosphere. An assessment of the survivability of satellite survivability upon reentry and the resulting probability of human casualty has been found to be Compliant. At the worst case scenario of 620 km circular altitude, the total time in orbit is expected to be 20.7 years. At the nominal altitude of 475 km circular altitude, the expected time in orbit is 6.9 years. At the lowest altitude of 350 km, the expected lifetime is approximately 3 months. Planet Labs openly publishes its orbital ephemerides, often more accurate than shown in the public TLE catalogs, so that other satellite operators may more accurately assess potential collision risks and avoid false positive warnings.²⁴

The Flock satellites are commercial remote sensing satellites subject to regulation by NOAA under Title 51 of the U.S. Code, as well as regulation by the Commission. Pursuant to licensing requirements codified under Title 51,²⁵ Planet Labs has requested review from NOAA on its plan for the post-mission disposal of its satellites. Per 47 C.F.R. § 25.114 (14)(iv), Planet Labs has submitted its post-mission disposal plans to NOAA for review and approval. Accordingly, no submission regarding the Planet Labs post-mission disposal plans is required or included with this application.

III. Additional/General Considerations

A. Waiver Request of Modified Processing Round Rules

Planet Labs requests that this application be processed pursuant to the first-come, first-served procedure adopted for “GSO-like satellite systems” under Section 25.158 of the Commission’s rules.²⁶ To the extent necessary to allow for such processing, Planet Labs also requests waiver of Sections 25.156 and 25.157 of the Commission’s rules, which stipulate the processing of “NGSO-like satellite systems” under a modified processing round framework.²⁷²⁸ The Commission has previously waived the modified processing round requirement and allowed a number of EESS NGSO satellite systems to be processed on a first-come, first-served basis, including the original Planet Labs authorization.²⁹³⁰³¹

Planet Labs’ system is fully capable of sharing with current and future NGSO systems operating in the same frequency bands, even with the proposed additional satellites. Spectrum sharing will be possible because the Planet Labs satellites and satellites in other systems transmit only in short periods of time while visible from a limited number of dedicated receiving earth stations. For harmful interference to occur, satellites belonging to different systems would have to travel through the narrow antenna beam of the receiving earth station and transmit at the exact same time. In such an unlikely event, the resulting interference can still be avoided by coordinating the satellite transmission so that they do not occur

²⁴ See Planet Labs Public Orbital Ephemerides (Access at <http://ephemerides.planet-labs.com/>).

²⁵ See 51 U.S.C. § 60122(b).

²⁶ See 47 C.F.R. § 25.158.

²⁷ See 47 C.F.R. §§ 25.156 & 25.157.

²⁸ See 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969) (“WAIT Radio”); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990) (“Northeast Cellular”).

²⁹ See *Space Imaging, LLC*, 20 FCC Rcd 11694, 11968 (2005). See also Stamp Grant, *Skybox Imaging, Inc.*, SAT-LOA-20120322-00058 (granted September 20, 2012).

³⁰ *Id.* See also *DigitalGlobe, Inc.*, 20 FCC Rcd 15696, 15699 (2005) (waiving Sections 25.156 and 25.157). See also Stamp Grant, *Skybox Imaging, Inc.*, SAT-LOA-20120322-00058 (granted September 20, 2012).

³¹ See Stamp Grant, *Planet Labs Inc.*, SAT-LOA-20130626-00087 (granted December 03, 2013).

simultaneously. For these reasons, the waiver request here is fully warranted because waiving Sections 25.156 and 25.157 will not undermine the policy objectives of those rules.

B. Waiver Request of Default Service Rules

Planet Labs requests a waiver of the default service rules under Section 25.217(b) of the Commission's rules.³² Although the Commission has not adopted band-specific rules for EESS NGSO operations in the 8025-8400 MHz band, the Commission has previously granted a waiver of the default service rules contained in Section 25.217(b) to NGSO EESS system licensees, based on the fact that EESS operators in the 8025-8400 MHz band are required to comply with technical requirements in Part 2 of the Commission's rules and applicable ITU rules.³³ In these cases, the Commission concluded that because the cited requirements had been sufficient to prevent harmful interference in the 8025-8400 MHz band, there was no need to impose additional technical requirements on operations in that band, and therefore granted the waiver requests. For these same reasons, the Commission should grant Planet Labs a waiver of the default service rules contained in Section 25.217(b).

C. Form 312, Schedule S

As required by the Commission's rules and policies, Planet Labs has completed the FCC Form 312, Schedule S submission that reflects the orbital and physical/electrical characteristics of the Planet Labs satellite network.

D. Implementation Milestones

Planet Labs intends to supply the Commission with information sufficient to demonstrate that it has already satisfied the first three implementation milestones under Section 25.164(b) for NGSO systems in a separate submission. Planet Labs understands that in the absence of a favorable Commission determination of milestone compliance issued with the grant of this application or within 30 days thereafter, the full amount of the bond specified in Section 25.165(a)(1) will be required.

E. ITU Advance Publication Materials and Cost Recovery

Planet Labs has prepared the International Telecommunication Union ("ITU") Advance Publication Information submission for its proposed non-geostationary EESS system, and has provided this information to the Commission under separate cover. In particular, Planet Labs has provided an electronic file with this information to the Satellite Engineering Branch of the Satellite Division of the Commission's International Bureau. Planet Labs has acknowledged that it is responsible for any and all cost recovery fees associated with filings for the proposed system under ITU Council Decision 482 (modified 2008), as it may be modified or succeeded in the future.

In sum, Planet Labs respectfully requests the Commission to grant the application for launch and operation authority as detailed herein. To the extent necessary, Planet Labs requests expedited

³² See 47 C.F.R. § 25.217.

³³ See Space Imaging, 20 FCC Rcd at 11973; DigitalGlobe, 20 FCC Rcd at 15701-02 (2005). See also Stamp Grant, Skybox Imaging, Inc., SAT-LOA-20120322-00058 (granted September 20, 2012).

consideration of this Application in order to ensure favorable Commission action in advance of the first launch as early as January 2016.

NOTIFICATION OF COMMENCEMENT OF SPACE STATION CONSTRUCTION

Planet Labs Inc. (“Planet Labs”), pursuant to Section 25.113(f) of the Commission’s rules, 47 C.F.R. § 25.113(f), hereby notifies the Commission that it has commenced construction, at its own risk, of the non-geostationary orbit (“NGSO”) satellites it proposes to launch and operate in the Application to which this statement is attached.³⁴ Planet Labs intends to add these satellites to its licensed NGSO Earth Exploration-Satellite Service system.

³⁴ See 47 C.F.R. § 25.164 (b)(3).

LINK BUDGETS

The proposed satellites will operate in a similar altitude band as Flock 1, and thus will have similar link characteristics as the originally licensed system. The maximum operational altitude of 720 km results in an increase in the path loss attenuation of up to 4.9 dB compared to Flock 1. This increase in path loss attenuation is well within the system link margins, as the satellites were designed for a wide range of operational altitudes. Considering all other link characteristics are identical, the link budgets are not repeated in this application.³⁵

³⁵ See File No. SAT-LOA-20130626-00087 (granted 12/03/13, Call Sign S2912).

PREDICTED GAIN CONTOURS

The following figures represent gain contours that have not been submitted in past filings. The gain contours are shown for the maximum and minimum operational altitudes for each respective frequency band.

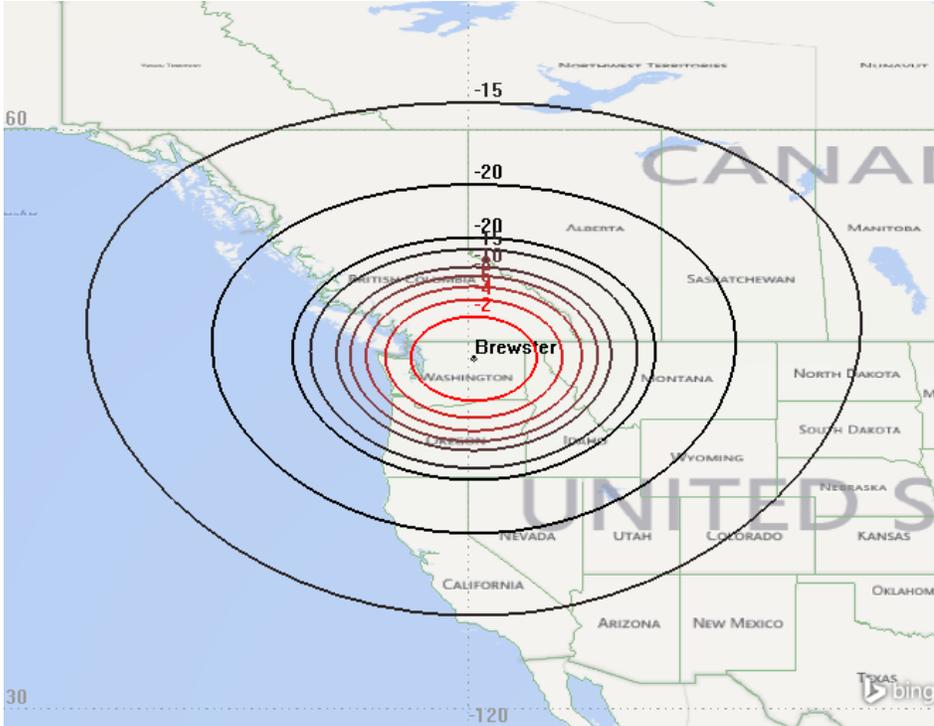


Figure 1 X-band helical antenna gain contour at 720km altitude over Brewster, WA ground station.

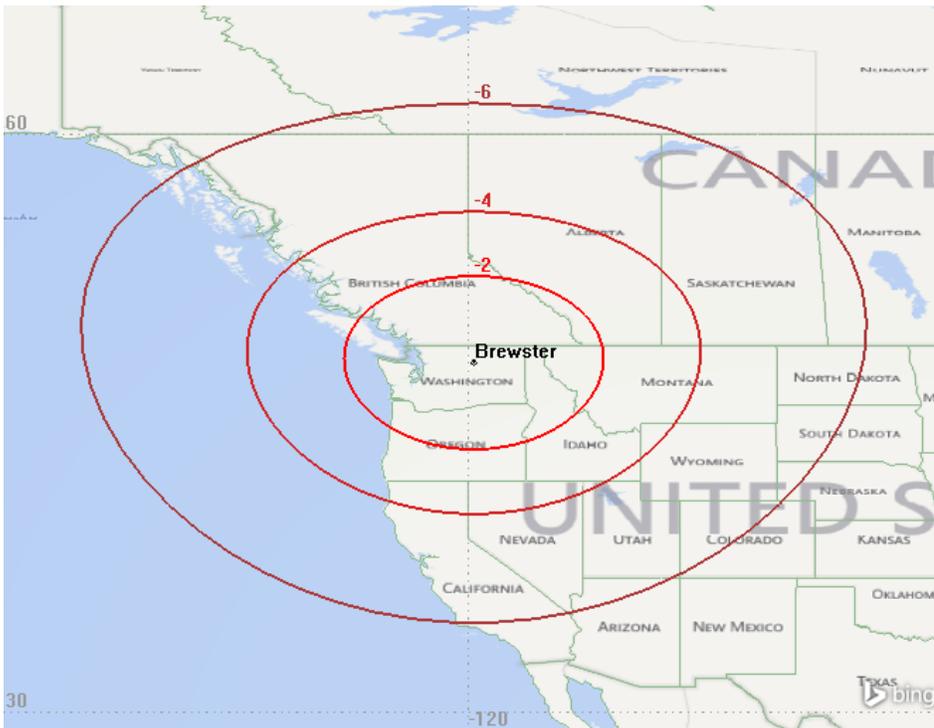


Figure 2 X-band patch antenna gain contour at 7200 km altitude over Brewster, WA ground station.³⁶

³⁶ The -8, -10, -15 and -20 gain contours do not intersect the Earth in this scenario and thus are not shown.

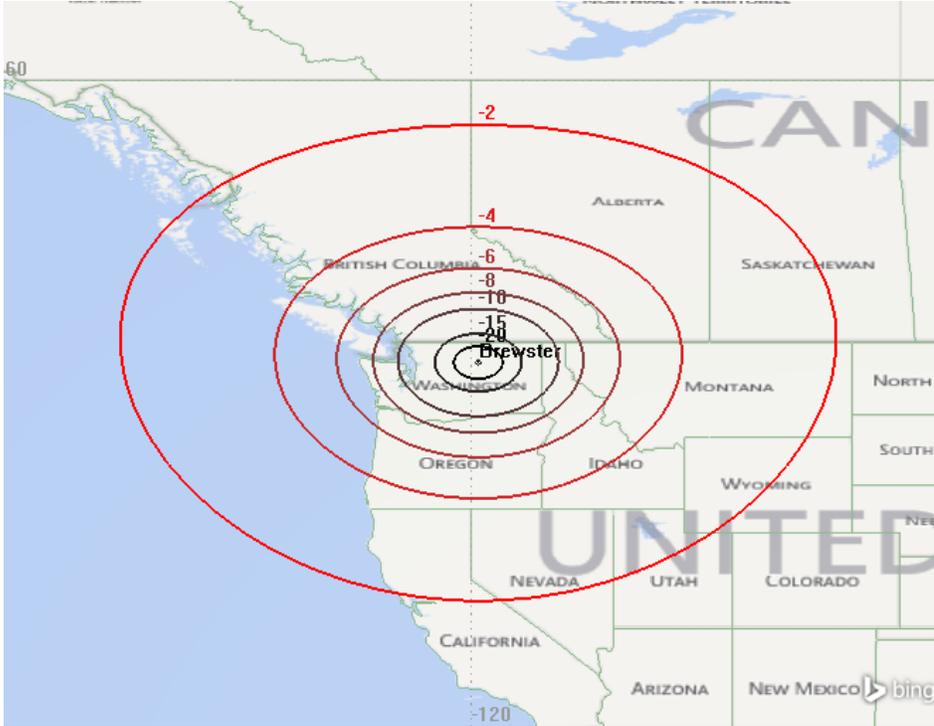


Figure 3 UHF monopole antenna gain contour at 720km altitude over Brewster, WA ground station.

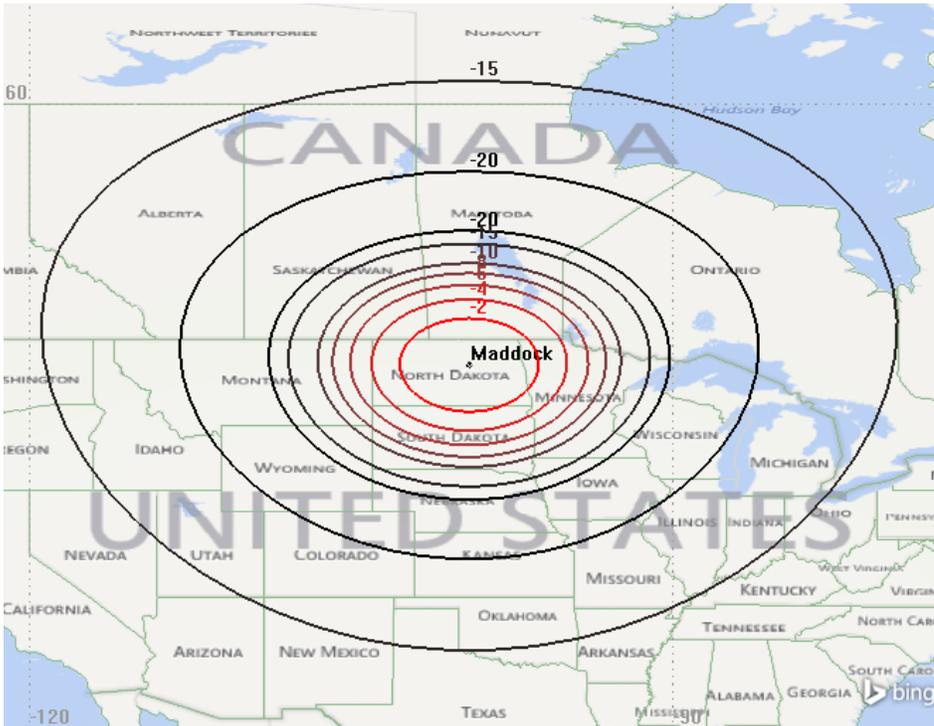


Figure 4 X-band helical antenna gain contour at 720 km altitude over Maddock, ND ground station

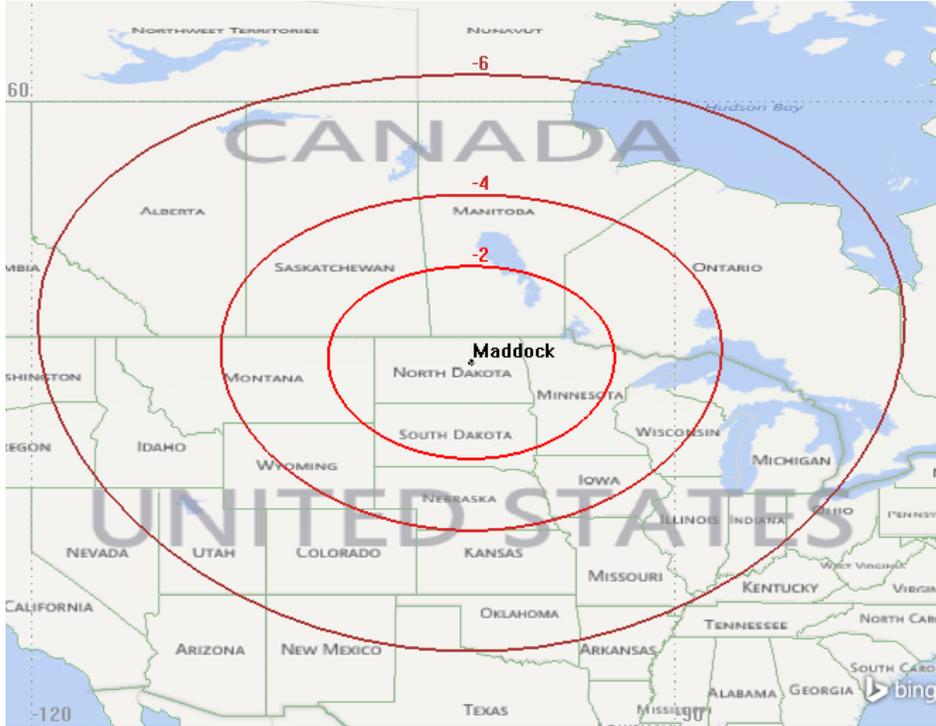


Figure 5 X-band patch antenna gain contour at 720 km altitude over Maddock, ND ground station.³⁷



Figure 6 UHF monopole antenna gain contour at 720 km altitude over Maddock, ND ground station.

³⁷ The -8, -10, -15 and -20 gain contours do not intersect the Earth in this scenario and thus are not shown.

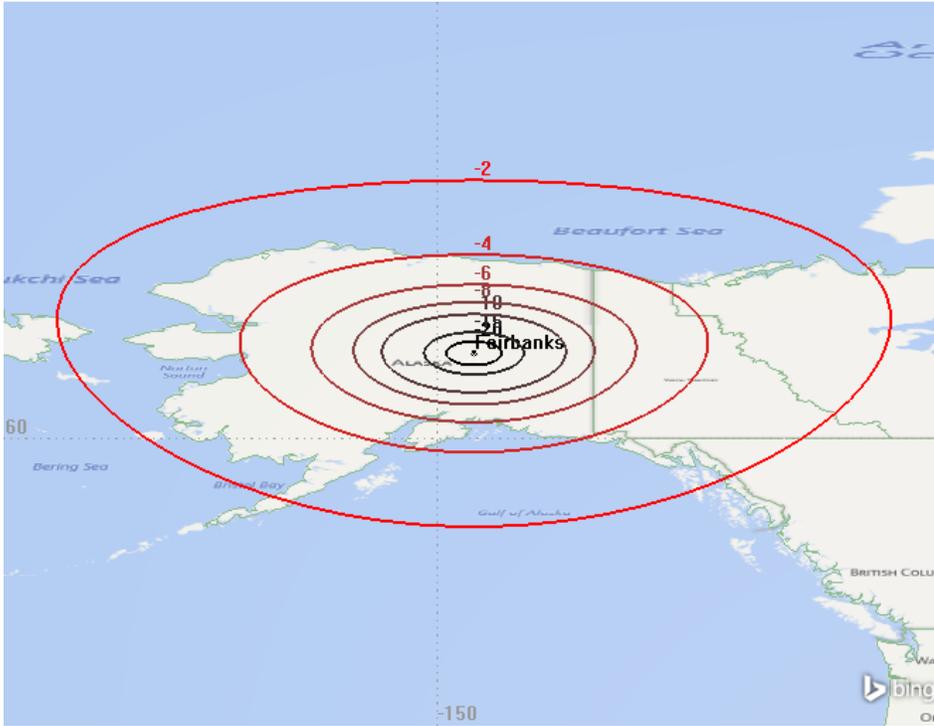


Figure 7 UHF monopole antenna gain contour at 720 km altitude over Fairbanks, AK ground station.

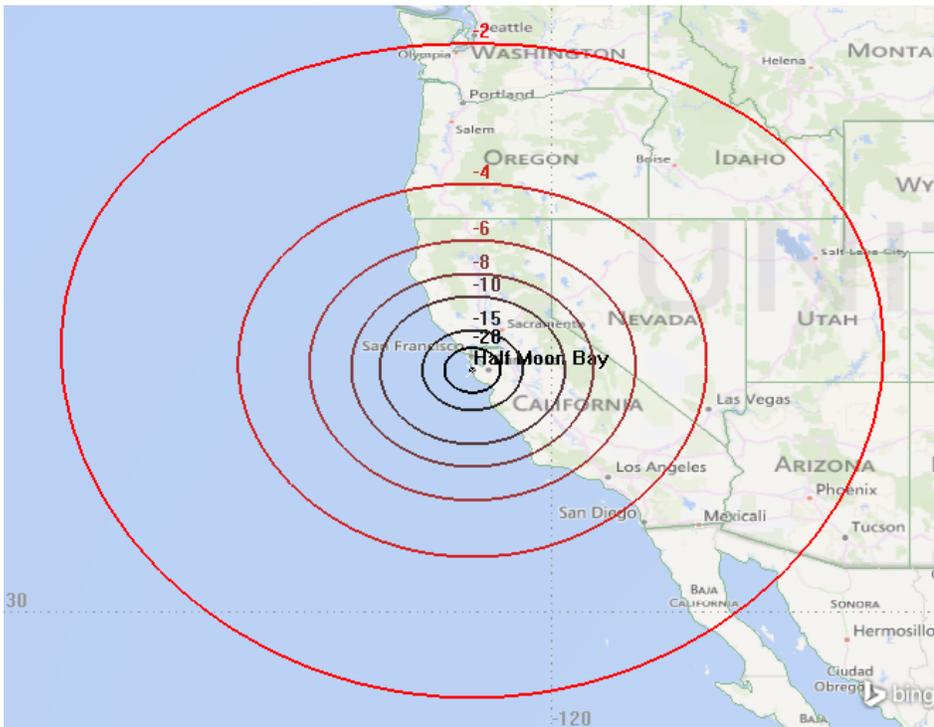


Figure 8 UHF monopole antenna gain contour at 720 km altitude over Half Moon Bay, CA ground station.

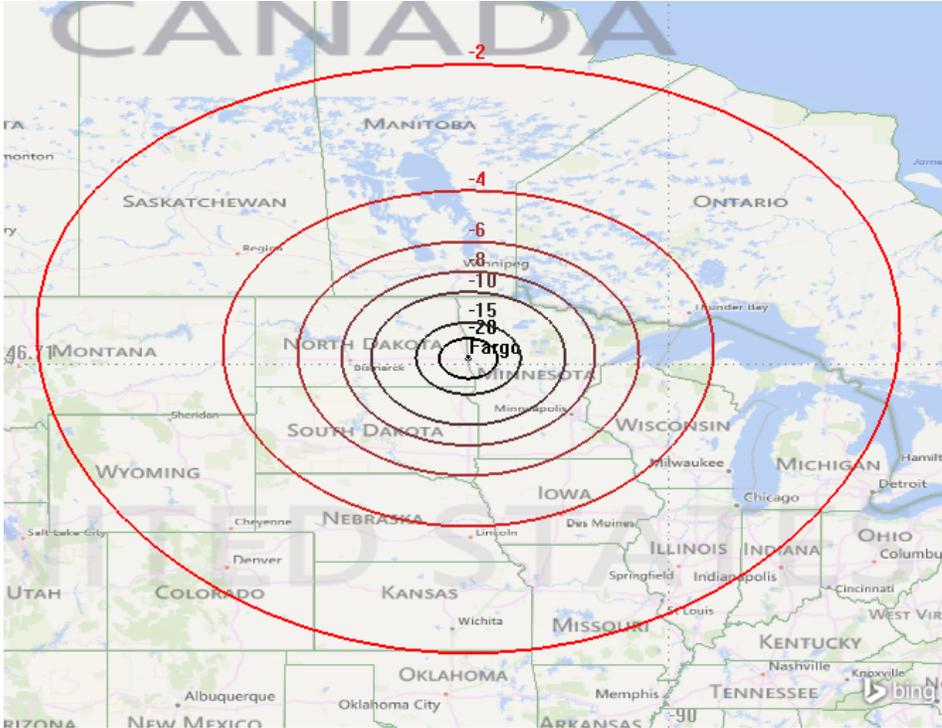


Figure 9 UHF monopole antenna gain contour at 720km altitude over Fargo, ND ground station.

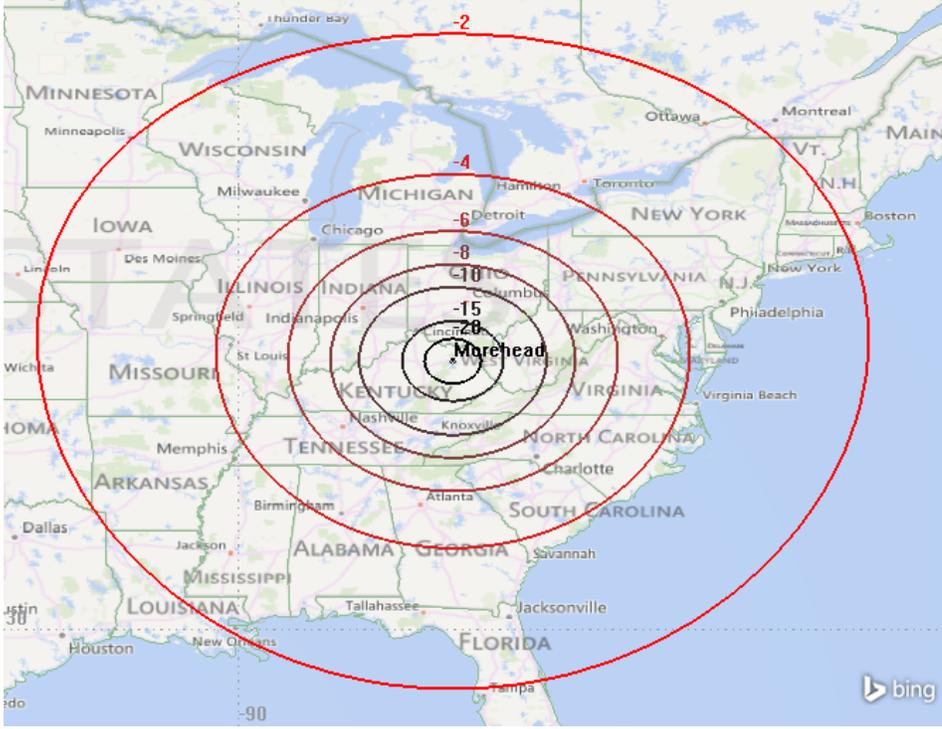


Figure 10 UHF monopole antenna gain contour at 720 km altitude over Morehead, KY ground station.

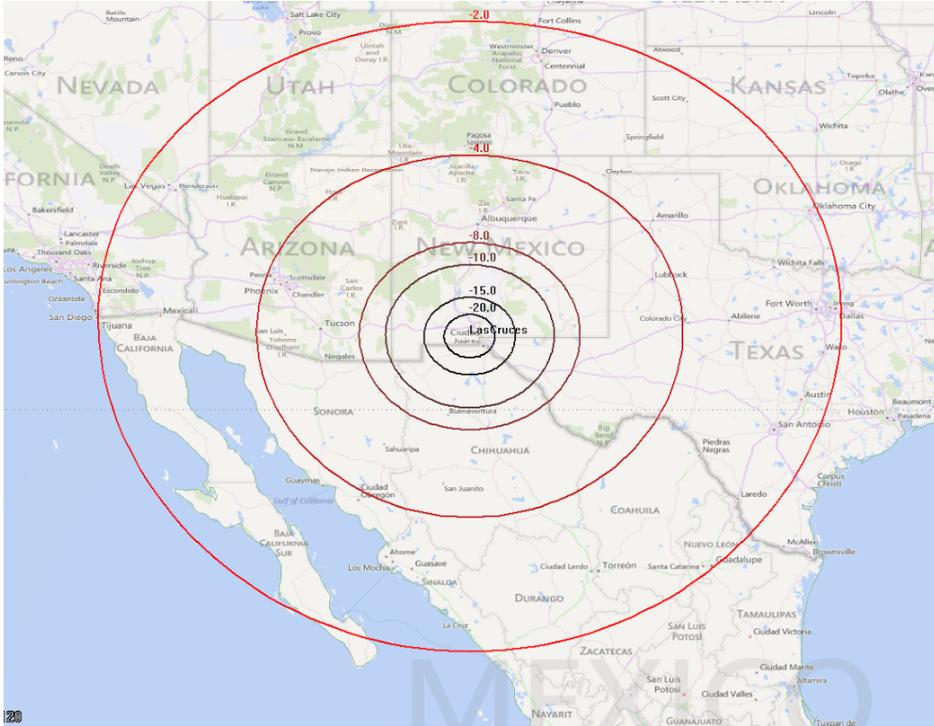


Figure 11 UHF monopole antenna gain contour at 720 km altitude over Las Cruces, NM ground station.

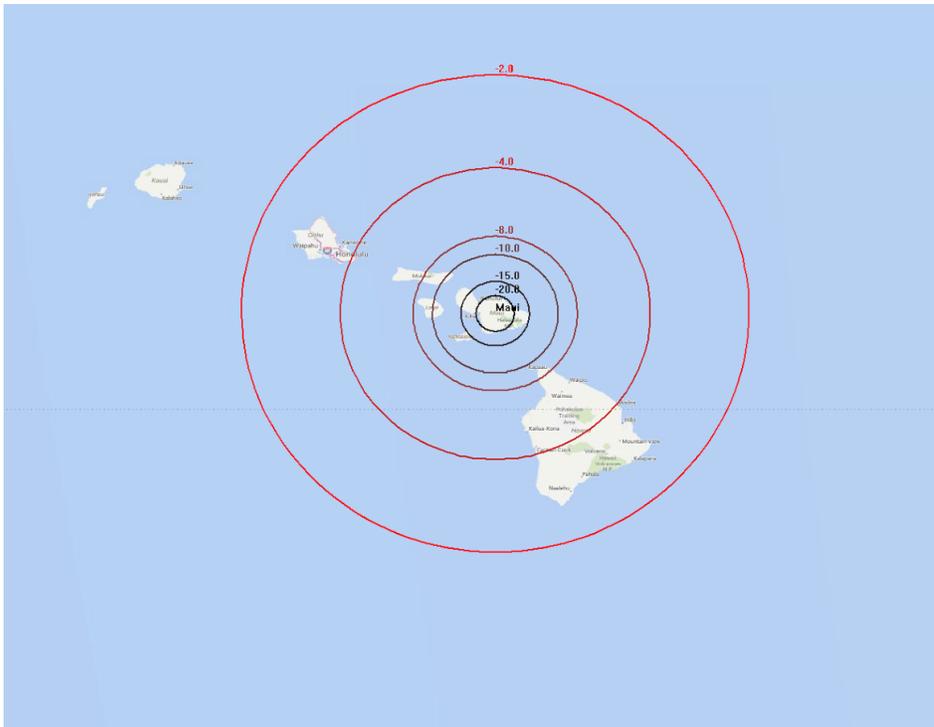


Figure 12 UHF monopole antenna gain contour at 200 km altitude over Maui, HI ground station.

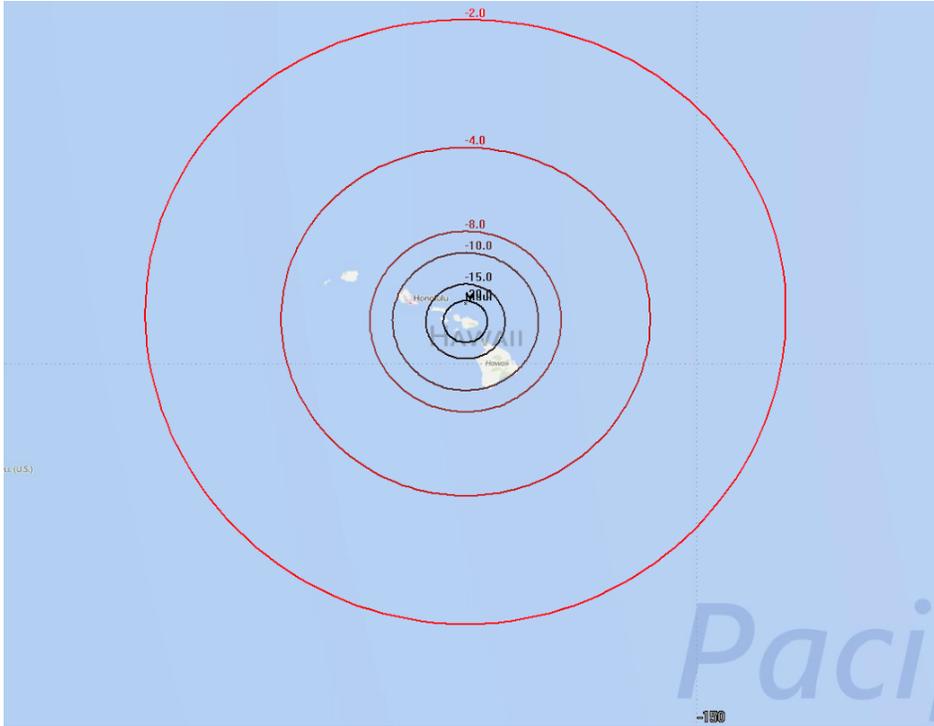


Figure 13 UHF monopole antenna gain contour at 720 km altitude over Maui, HI ground station.

IV. TECHNICAL CERTIFICATE

I, Michael Safyan, hereby certify, under penalty of perjury, that I am the technically qualified person responsible for the preparation of the engineering information contained in the technical portions of the foregoing application and the related attachments, that I am familiar with Part 25 of the Commission's rules, and that the technical information is complete and accurate to the best of my knowledge and belief.

/s/ Michael Safyan

Michael Safyan

Director of Launch and Regulatory

Planet Labs Inc.

Dated: July 29, 2015